UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,816	03/23/2004	Manabu Nakahanada	04186 /LH	3709

1933 7590 07/12/2006

FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
220 Fifth Avenue
16TH Floor
NEW YORK, NY 10001-7708

EXAMINER	
MARTINEZ, CARLOS A	

ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/806,816	NAKAHANADA ET AL.	
	Examiner	Art Unit	
	Carlos A. Martinez	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-52 is/are pending in the application.

4a) Of the above claim(s) 1-20,28-36 and 39-52 is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 21-27,37 and 38 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 23 March 2004 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 6/30/04 & 8/16/04.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claims 1-20, 28-36, 39, and 40-52 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 06/26/2006.

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

2. The abstract of the disclosure is objected to because of the phraseology, "There is described". Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 37 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe (US6034710) in view of Ishikawa (US5661544).

- Kawabe teaches an apparatus for forming an image (refer to abstract), comprising: a print head (refer to element 30) in which a plurality of recording elements are arranged in a first array line, said print head being utilized for recording a correction image onto a photosensitive material (refer to abstract; lines 5-21 of column 19; and lines 28-49 of column 14); a correction amount finding section to find correction amounts of recording characteristics, each of which corresponds to each of said plurality of recording elements, from said readout information acquired by said image-reading device (refer to lines 30-55 of column 12; also lines 26-38 of column 3).
- Kawabe mentions an image-reading device provided with an image-receiving head (refer to lines 54-64 of column 18), but fails to specifically mention a plurality of photo-receiving elements are arranged in a second array line, said image-receiving head being utilized for reading said correction image printed by said print head, so as to acquire readout information. Ishikawa teaches an image-reading device provided with an image-receiving head in which a plurality of photo-receiving elements are

arranged in a second array line (refer to lines 48-50 of column 3), said image-receiving head being utilized for reading said correction image printed by said print head, so as to acquire readout information (refer to lines 39-47 and 51-67 of column 3; also lines 1-4 of column 4). Also, Kawabe does not specifically mention where a direction of said first array line coincides with that of said second array line. Ishikawa teaches where a direction of said first array line coincides with that of said second array line (refer to lines 29-34 and 48-50 of column 3).

- Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify an image forming apparatus, as taught by Kawabe, with an image-reading device provided with an image-receiving head in which a plurality of photo-receiving elements are arranged in a second array line, said image-receiving head being utilized for reading said correction image printed by said print head, so as to acquire readout information, a correction amount finding section to find correction amounts of recording characteristics, each of which corresponds to each of said plurality of recording elements, from said readout information acquired by said image-reading device, and where a direction of said first array line coincides with that of said second array line, as taught by Ishikawa, for the purpose of providing a way to analyze/correct a formed image through information/data received by photo-receiving elements where the image formed by an array of recording elements can be effectively analyzed/corrected because of being along a same direction as an array of receiving elements.

With respect to claim 21, *the method for forming an image by employing a print head is rejected based on the functions provided by the apparatus.*

4. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe (US6034710) in view of Ishikawa (US5661544), as applied to claim 21 above, and further in view of Komiya (US6287027).

- Kawabe (in view of Ishikawa) fails to specifically mention where a calibrating operation is applied to each of said plurality of photo-receiving elements.
- Komiya teaches where a calibrating operation is applied to each of said plurality of photo-receiving elements (refer to lines 58-64 of column 10; also 28-38 of column 9).
- Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify an image forming apparatus, as taught by Kawabe (in view of Ishikawa), where a calibrating operation is applied to each of said plurality of photo-receiving elements, as taught by Komiya, for the purpose of providing photo-receiving elements that are calibrated to for improved image receiving.

With respect to claim 23,

- Kawabe (in view of Ishikawa) fails to specifically mention where part of said correction image is employed for said calibrating operation.
- Komiya teaches where part of said correction image is employed for said calibrating operation (refer to lines 39-48 of column 9).

- Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify an image forming apparatus, as taught by Kawabe (in view of Ishikawa), where part of said correction image is employed for said calibrating operation, as taught by Komiya, for the purpose of providing other correction operations in a single correction image page.

5. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe (US6034710) in view of Ishikawa (US5661544) and Komiya (US6287027), as applied to claim 23 above, and further in view of Yamaguchi (US6788431).

- Kawabe (in view of Ishikawa and Komiya) fails to specifically mention where density of a calibration image employed for said calibrating operation is set at a point on a non-liner region of characteristic curve of said photosensitive material.
- Yamaguchi teaches where density of a calibration image employed for said calibrating operation is set at a point on a non-liner region of characteristic curve of said photosensitive material (refer to lines 35-38 of column 8; also claim 13).
- Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify an image forming apparatus, as taught by Kawabe (in view of Ishikawa and Komiya), where density of a calibration image employed for said calibrating operation is set at a point on a non-liner region of characteristic curve of said photosensitive material, as taught by Yamaguchi, for the purpose of providing calibration known to those skilled in the art with respect to a non-linear region.

With respect to claim 25,

- Kawabe (in view of Ishikawa and Komiya) fails to specifically mention where a non-exposed part of said correction image is employed for said calibrating operation.
- Komiya teaches where a non-exposed part of said correction image is employed for said calibrating operation (refer to lines 45-50 of column 3 and lines 46-54 of column 11).
- Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify an image forming apparatus, as taught by (in view of Ishikawa and Komiya), where a non-exposed part of said correction image is employed for said calibrating operation, as taught by Yamaguchi, for the purpose of providing calibration known to those skilled in the art with respect to a non-exposed part of region.

6. Claims 38, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe (US6034710) in view of Ishikawa (US5661544) and Komiya (US6287027).

- Kawabe teaches an apparatus for forming an image (refer to abstract), comprising: a print head (refer to element 30) in which a plurality of recording elements are arranged in a first array line, said print head being utilized for recording a correction image onto a photosensitive material (refer to abstract; lines 5-21 of column 19; and lines 28-49 of column 14); a correction amount finding section to find correction amounts of recording characteristics, each of which corresponds to each of said plurality of recording elements, from said readout information acquired by said

image-reading device (refer to lines 30-55 of column 12; also lines 26-38 of column 3).

- Kawabe mentions an image-reading device provided with an image-receiving head (refer to lines 54-64 of column 18), but fails to specifically mention a plurality of photo-receiving elements are arranged in a second array line, said image-receiving head being utilized for reading said correction image printed by said print head, so as to acquire readout information. Ishikawa teaches an image-reading device provided with an image-receiving head in which a plurality of photo-receiving elements are arranged in a second array line (refer to lines 48-50 of column 3), said image-receiving head being utilized for reading said correction image printed by said print head, so as to acquire readout information (refer to lines 39-47 and 51-67 of column 3; also lines 1-4 of column 4). Also, Kawabe does not specifically mention where a direction of said first array line coincides with that of said second array line. Ishikawa teaches where a direction of said first array line coincides with that of said second array line (refer to lines 29-34 and 48-50 of column 3). Further, neither Kawabe nor Ishikawa specifically mention where the correction amount finding section applies a rotation processing to said readout information so as to specify said readout information corresponding to each of said plurality of recording elements. Komiya teaches where the correction amount finding section applies a rotation processing to said readout information so as to specify said readout information corresponding to each of said plurality of recording elements (refer to lines 25-41 of column 10; also lines 43-47 and 56-67 of column 7).

- Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify an image forming apparatus, as taught by Kawabe, with an image-reading device provided with an image-receiving head in which a plurality of photo-receiving elements are arranged in a second array line, said image-receiving head being utilized for reading said correction image printed by said print head, so as to acquire readout information, a correction amount finding section to find correction amounts of recording characteristics, each of which corresponds to each of said plurality of recording elements, from said readout information acquired by said image-reading device, where a direction of said first array line coincides with that of said second array line, and where the correction amount finding section applies a rotation processing to said readout information so as to specify said readout information corresponding to each of said plurality of recording elements, as taught by Ishikawa and Komiya, for the purpose of providing a way to analyze/correct a formed image through information/data received by photo-receiving elements where the image formed by an array of recording elements can be effectively analyzed/corrected because of being along a same direction as an array of receiving elements and for the purpose of providing rotation processing known to those skilled in the art for correcting errors in the image formed by the plurality of recording elements.

With respect to claim 26, *the method for forming an image by employing a print head is rejected based on the functions provided by the apparatus.*

With respect to claim 27,

- Kawabe and Ishikawa fails to specifically mention where the correction image includes an inclination-determining marker; and wherein said inclination-determining marker is employed for determining an inclination of said correction image so as to apply said rotation processing to said readout information.
- Komiya teaches where the correction image includes an inclination-determining marker; and wherein said inclination-determining marker is employed for determining an inclination of said correction image so as to apply said rotation processing to said readout information (refer to lines 25-41 of column 10).
- Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify an image forming apparatus, as taught by Kawabe (in view of Ishikawa), where the correction image includes an inclination-determining marker; and wherein said inclination-determining marker is employed for determining an inclination of said correction image so as to apply said rotation processing to said readout information, as taught by Komiya, for the purpose of providing visible indications for the implementation of corrective measures toward applying a rotation processing.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos A. Martinez whose telephone number is (571)272-8349. The examiner can normally be reached on 8:30 am - 5:00 pm (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D. MEIER can be reached on (571)272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CAM
07/09/2006

HAI PHAM
PRIMARY EXAMINER